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# CDF Operations Report

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28-Apr-2003

All Experimenters Meeting



# This Week's Stores

Date	Store	Duration (hours)	Initial L ( $10^{30}$ )	Delivered (nb <sup>-1</sup> )	Live (nb <sup>-1</sup> )	$\epsilon$
Mo 4/21	2447	17.9	39.7	1406.0	1084.1	77%
Sa 4/26	2485	7.9	19.7	407	355	87%
Su 4/27	2487	10.1	32.8	814	671	82%
Su 4/27	2490	13.4	35.2	1103.6	985.2	87%
Total				3.7 pb <sup>-1</sup>	3.1 pb <sup>-1</sup>	84%

Thursday: 2 shift supervised access

Saturday: 90 minutes controlled access



# Access works

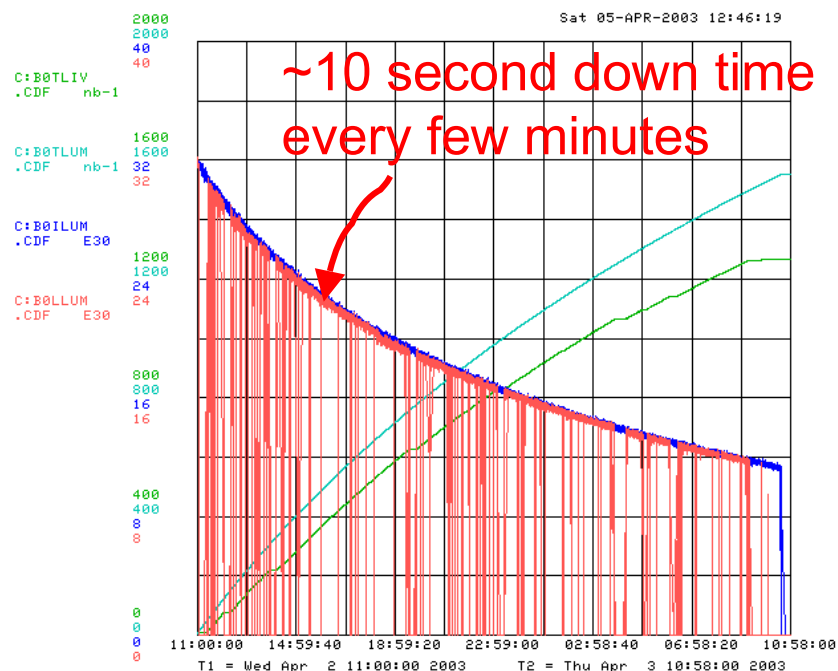
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- **Supervised access : Thursday 0600 ~ 2200**
  - Fixed COT SL8 HV trip
    - HV for ~100 wires in SL8 is lower by 50-100V
    - Open west Plug , disable two wires causing the HV trip
      - Successfully recovered the other channels
  - Silicon FTM buffing (Next slide)
    - Modify FTM (FIB transition module):
      - Convert optical signal from Si detector to electrical signal
      - Protect silicon readout chip
    - Total 55 FTMs (~ 1 hour / FTM )
    - Several 1—2 hour's controlled accesses this month + this supervised access
- **Controlled access : Saturday 2100 ~ 2230**
  - Fixed 3 SVX wedges (trigger wedges)
  - All 3 wedges work ok now

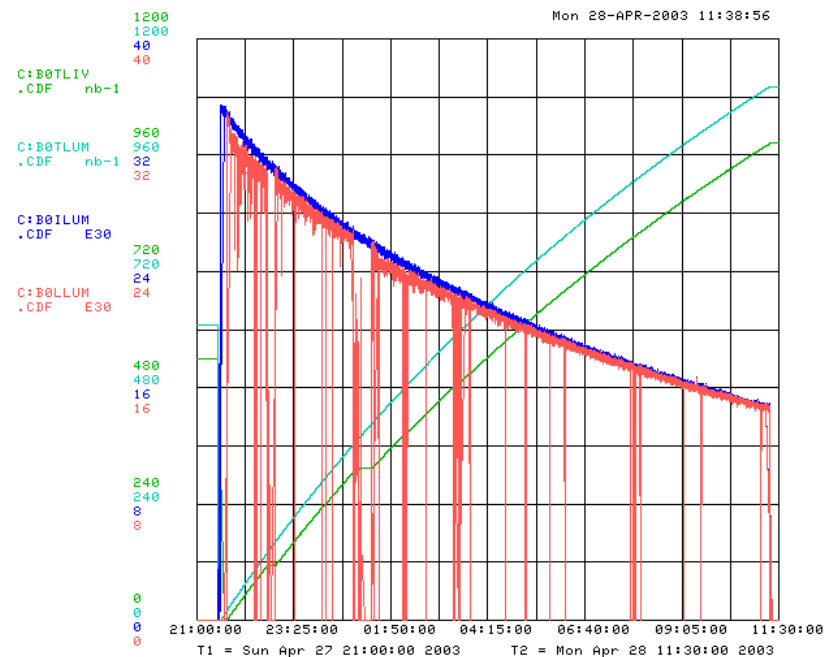


# Silicon FTMs

- One of the outcomes:
  - More stable operation of silicon readout (Reduce DAQ deadtime)



Store 2385 (Apr/2)  
~3% DAQ deadtime



Store 2490 (Apr/28)  
<1% DAQ deadtime



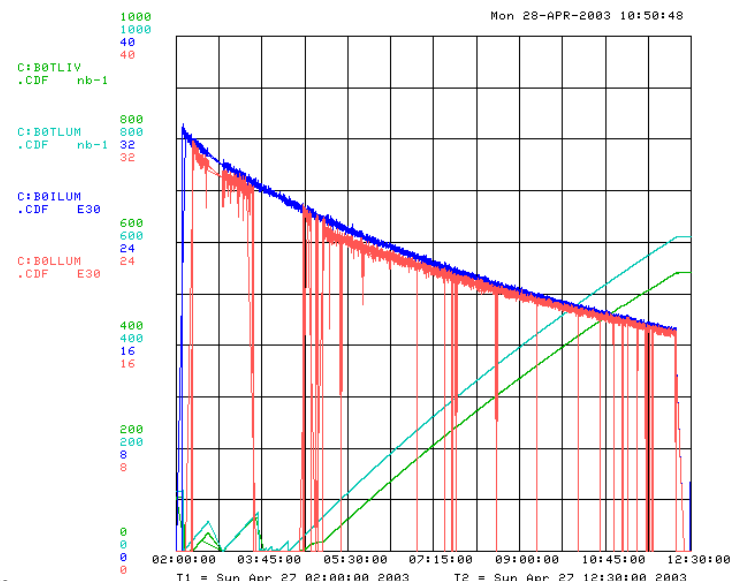
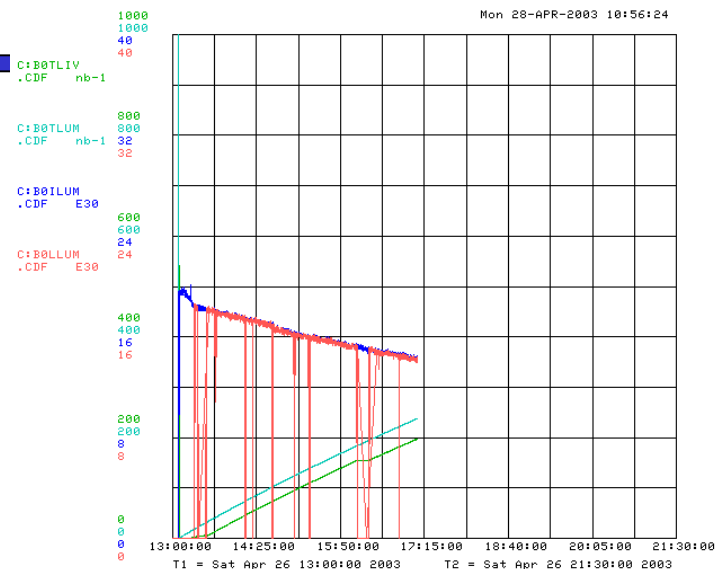
# Luminosity/Beam Loss monitoring

- **Store 2485**

- Luminosity and beam loss information were unavailable for Acnet: Detector had no problem
- Can't calculate online luminosity
  - can be restored offline
- Can't integrate silicon
  - For safety
- Fixed after the store

- **Store 2487**

- Similar problem:
- Recovered in ~ 20 minutes





# Startup Time

- **Beginning of the store**
  - $\sim 2 \text{ nb}^{-1}$  per minutes @  $L=30\text{e}30$
  - Integrated luminosity  $\sim 1 \text{ pb}^{-1}/\text{store}$
  - 2% per 10 minutes
  - One of our main concern for data taking efficiency
- **Trying to speed up the startup time**
  - >20 minutes (last fall)
  - $\sim 10$  minutes (Now)
    - Monitoring initial beam losses
      - very stable losses recently
    - Ramping up Silicon HV
    - Still room for improvement

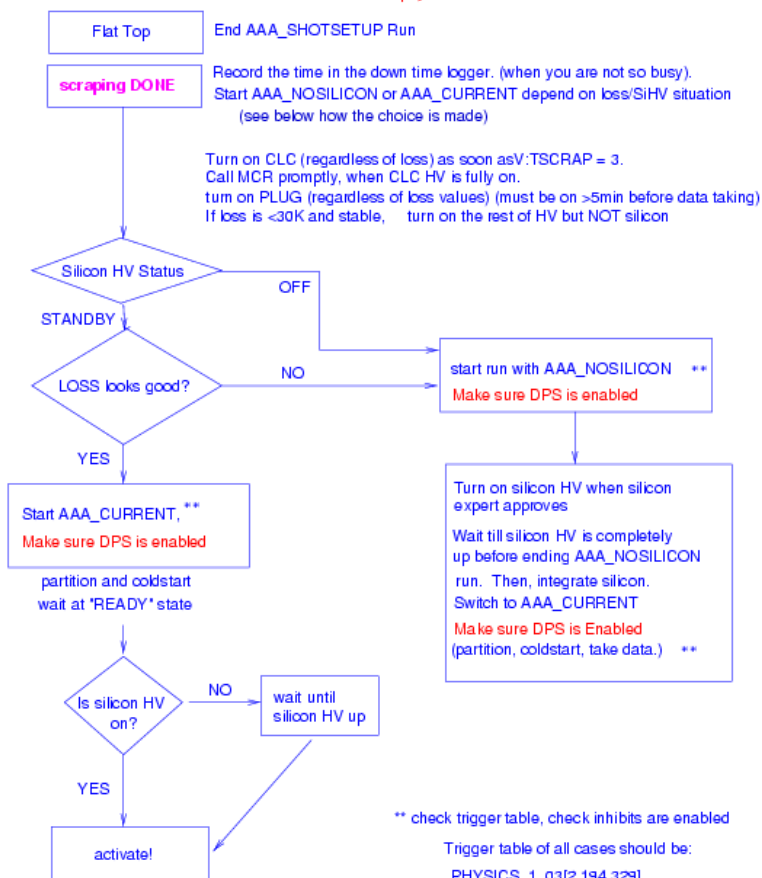
## shotsetup flow chart (with Silicon)

\* when antiproton loading starts, page silicon (218-8227)

\* should be running AAA\_SHOTSETUP run.

DPS (dynamic prescale) should be ENABLED for all physics runs.

Auto HRR should be ENABLED for all physics runs from the Error Handler GUI.



\*\* check trigger table, check inhibits are enabled

Trigger table of all cases should be:  
PHYSICS\_1\_03[2,194,323]

Last update: Dec. 13 2002, Koon



# Summary / Plan

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- Successful supervised access
  - Recovered COT SL8
  - Silicon FTM modification: more stable Silicon operation
- ~90% data taking efficiency for last three stores
  - ~2%: for startup at the beginning of the store (2 nb<sup>-1</sup> per 1 minutes)
  - ~3%: Trigger/DAQ deadtime
  - ~5%: Down time by several minor failures
- We are working hard for further improvement